

REMARKS

The Final Office Action and cited references have been reviewed. The Applicant hereby files a Request for Continued Examination pursuant to 37 C.F.R. 1.114, and the foregoing amendments and following remarks are submitted to meet the submission requirements thereof. In the Final Office Action, claims 1-14 and 16-18 were rejected as obvious. Claims 1, 3, 12, 13 and 16 have been amended and claims 19-22 have been added to more clearly describe the invention and to define aspects not disclosed or taught by the prior art. Thus, claims 1-14 and 16-22 remain pending and at issue herein. Applicant respectfully requests reconsideration and indication of allowability of claims 1-14 and 16-22 in light of the foregoing amendments and following remarks.

The Examiner rejected claims 1-14 and 16-18 under 35 U.S.C. §103(a) as being unpatentable over Hanke (US 4,869,786) in view of Weit (US 5,232,096). Claims 1, 3, 12, 13 and 16 have been amended to more clearly define aspects of the claimed invention not disclosed or taught by the cited references.

As amended, independent claim 1 claims a dynamic air classifier comprising a rotary cage and a recovery chamber. The rotary cage is a classifying station which classifies incoming particulate materials into fractions of differing particle sizes. As such, the amended independent claim 1 recites "rotary cage classifying the materials into fine particles and coarse particles". On the other hand, the recovery chamber does not classify particulate materials into fractions of differing particles sizes, rather, it takes the classified fine particles from the rotary cage and separates them from air, thereby recovering the dedusted air and the fine particles separately. Thus, claim 1 recites "the recovery chamber receives the fine particles mixed with air from the rotary cage . . . and separat[es] the fine particles from air . . . wherein the fine particles separated from the air exit through the fine particles outlet and a dedusted air exits through the air outlet." As such, the claimed dynamic air classifier does not require an external filter or cyclone for recovering fines from air.

However, the claimed recovery chamber for separating the fine particles from air is not disclosed in Hanke or Weit. The Hanke system teaches a multi-stage air classification system including two classifying stations, each of which has its own

centrifuge basket. The first air classifier stage 1 classifies particles into coarse material particles and fine material particles. The coarse material particles fall into the coarse material hopper 8, which then are further classified in the second air classifier 2. *See* Hanke, column 5, lines 17-64. The fine material particles classified from the coarse material particles in the first air classifier stage 1 do not enter the second air classifier 2. Rather, "[t]he **fin**es led by the classifying air into the interior of centrifuge basket 9 are **sucked out to the following dust separators.**" Hanke, column 5, lines 38-40. The coarse material particles from the first air classifier stage is reclassified into coarse material particles and fine material particles in the second air classifier 2. The "residual fines [from the second air classifier] are sucked together with the mixed air . . . by means of two air outlets 23 laterally connected to collecting vessel 22 which supply **the fines-laden classifying air to further dust separators.**" Hanke, column 6, lines 31-37.

The Examiner called out the second air classifying stage 2 as the equivalent structure to the recovery chamber as required in claim 1. However, as discussed above, the second air classifier 2 of Hanke system is actually another classifier stage for further reclassification of the **coarse materials** from the first air classifier stage 1. Specifically, Hanke states in column 5, lines 53-56, "[t]he coarse material leaving the first coarse material hopper 8 passes onto . . . the second centrifuge basket 14 [of the second air classifier stage 2] for reclassification purposes." The second air classifier stage 2 receives coarse material particles from the first classifier stage 1, not fine particles mixed with air as required in claim 1. Further the second air classifying stage 2 reclassified coarse particles, and it does not separate fine particles from air as required in claim 1. Further, the fine particles mixed with classifying air from each of the classifying stations are suck out from the system to one or more external cyclone(s) or filter(s) for separation of the fines from air. Therefore, Applicant respectfully submits that Hanke fails to teach the recovery chamber for separating fine particles from air as claimed in claim 1.

Further, Weit does not cure the Hanke's deficiency. Weit teaches a system including a classifier basket 4 and a fine material outlet 26. *See* Weit figure 1. In the Weit's system, coarse material is classified from fine material and fine material enters the classifier basket lead by air, then the fine material mixed with air exits the system through the fine material outlet 26. *See* Weit, column 3, lines 40-45. As shown if

figure 1 of Weit the fine material outlet 26 only includes a single opening to outside, and does not include separate outlets for fine particles and dedusted air as required in claim 1. Further, Weit does not teach or suggest a recovery chamber for separating fine particles from air as required by independent claim 1. Therefore, Applicant respectfully solicits reconsideration and indication of allowability of independent claim 1 and its dependent claims 2-13 and 16-19.

Similarly, independent claim 14 requires "recovering the fine materials in the recovery chamber (2) . . . using the vortex created by the rotary cage and possibly further accelerated by mobile or fixed deflectors (4) for cycloning the fine material; separating the dedusted air and the fine particles and extraction of the latter to a means of conveyance." However, as discussed at length with regard to claim 1, Hanke and Weit do not teach or suggest separating fine particles and dedusted air in the recovery chamber. Thus, Applicant respectfully requests reconsideration and indication of allowability of claim 14.

Claims 19-22 were added to further distinguish Hanke and Weit by more clearly stating the features of the recovery chamber for separating fine particles from air and separately recovering them, as discussed above. The support for this amendment is found in paragraphs [0008], [0040], [0045]-[0050].

Finally, in response to the Examiner's comments regarding functional language and/or intended use phrasing, Applicant reiterates that claim 1, as amended, no longer includes any functional language and/or intended use phrasing. Claim 1 now recites "a rotary cage (1) adapted to created a vortex when subject to air flow" and "the recovery chamber (2) adapted to use the vortex created by the rotary cage". Such use of "adapted to" language is consistent with the Court's holding regarding allowable languages to define a claimed structure. The Court has held that limitations including "members adapted to be positioned" in a claim directed to a kit of component parts capable of being assembled serve to precisely define present structural attributes of interrelated component parts of the claimed assembly. *See* MPEP § 2173.05(g) citing *In re Venezia*, 530 F.2d 956 (CCPA 1976). As such, Applicant respectfully submits that claim 1 defines the claimed structure which is distinguishable over the prior art as discussed above. That is, it defines the structural interrelationships that are missing in the cited prior art.

In re Appln. Of: Xavier Prignon
Application No.: 10/586,236

Conclusion

The application is considered in good and proper form for allowance, and the Examiner is respectfully requested to pass this application to issue. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

Extension of Time and Fee Deficiency

Applicants believe that a three month extension of time is required. However, this conditional petition is being made to provide for the possibility that Applicants have inadvertently overlooked the need for a petition and fee for extension of time. If any additional fee is required, or any overpayment is made, in connection with this communication please charge or credit deposit account No. 50-3505.

Respectfully submitted,

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Date: February 16, 2009